

**Abstract**

Disclosed a nitride semiconductor LED including: a substrate; a GaN-based buffer layer formed on the substrate;  $\text{Al}_y\text{Ga}_{1-y}\text{N}/\text{GaN}$  short period superlattice (SPS) layers formed on the GaN-based buffer layer in a sandwich structure of upper and lower parts having an undoped GaN layer or an indium-doped GaN layer interposed therebetween (Here,  $0 \leq y \leq 1$ ); a first electrode layer of an n-GaN layer formed on the upper  $\text{Al}_y\text{Ga}_{1-y}\text{N}/\text{GaN}$  SPS layer; an active layer formed on the first electrode layer; and a second electrode layer of a p-GaN layer formed on the active layer.